

20070424.ba v04\_n043.bam.20070424

>From ???@??? Tue Apr 24 14:56:02 2007 -0500  
Date: Tue, 24 Apr 2007 19:53:36 GMT  
From: Old Tube Radios <boatanchors@theporch.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: BOATANCHORS digest 4043  
Message-Id: <20070424195336.E69444701D1@srvr1.theporch.com>

BOATANCHORS Digest 4043

Topics covered in this issue include:

- 1) Re: Fwd: Re: EFJ Desk KW refinishing problem  
by wb3fau@att.net
- 2) Re: Opposed to Revision RM-11306  
by "Al Parker" <anchor@ec.rr.com>
- 3) Re: Opposed to Revision RM-11306  
by "Tom Rauch" <w8ji@contesting.com>
- 4) Old 'Lytics  
by John Sehring <jsehring@siouxvalley.net>
- 5) Re: Old 'Lytics  
by Scott Robinson <spr@earthlink.net>
- 6) Re: Old 'Lytics  
by wb3fau@att.net
- 7) Re: Old 'Lytics  
by "Ken" <n5cm@rtconline.com>
- 8) Re: Old 'Lytics  
by wb3fau@att.net
- 9) Re: Old 'Lytics  
by stuck in 50s <polepeeg@aa4rm.ba-watch.org>
- 10) Re: Old 'Lytics  
by Al Klase <al@ar88.net>
- 11) FS: Millen, Heathkit, Hallicrafters, Yaesu and Skillman  
by David Hollander <n7rk@cox.net>
- 12) Re: Old 'Lytics  
by "Arden Allen" <gumbear@pacbell.net>
- 13) Re: Old 'Lytics  
by "Arden Allen" <gumbear@pacbell.net>
- 14) Need Gonset 3111 Schematic/Manual  
by "Gary H. Harmon Jr." <gharmon@idworld.net>
- 15) Re: Old 'Lytics  
by spr@earthlink.net
- 16) Re: Old 'Lytics  
by w1id@comcast.net

---

From: wb3fau@att.net

To: Old Tube Radios <boatanchors@theporch.com>  
Cc: "James C. Garland" <4cx250b@muohio.edu>  
Subject: Re: Fwd: Re: EFJ Desk KW refinishing problem  
Date: Mon, 23 Apr 2007 12:58:16 +0000  
Message-Id:  
<042320071258.10303.462CAD680006B9BF0000283F21587667559A0E00CC0D99@att.net>

Looking back in old Handbooks advertizement section- they gave a place of shipping from a place called Corry-Jamestown, in Corry, PA. The place is out of business, used to make office funiture.

-----  
Message-ID: <01c401c785a7\$149fd440\$6401a8c0@reloaded>  
From: "Al Parker" <anchor@ec.rr.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Opposed to Revision RM-11306  
Date: Mon, 23 Apr 2007 08:58:22 -0400  
MIME-Version: 1.0  
Content-Type: text/plain;  
format=flowed;  
charset="iso-8859-1";  
reply-type=response  
Content-Transfer-Encoding: 7bit

Tom,

From your website:

"The ARRL would have this section modified to say: "The bandwidth of a RTTY or data emission must not exceed 3 kHz.""

You say, "Gone is the 1 kHz frequency shift limit on RTTY. The ARRL would have it expanded to 3 kHz. In addition, the 300 baud symbol rate is dropped."

It appears to me that the bandwidth will not be 3khz if the shift is 3khz, but greater than 3. So a station can't do both.

Do we have a 3rd combatant propagating untruths?

This list isn't a proper forum for this discussion. I won't continue it any further here.

73,

Al, W8UT

New Bern, NC

[www.boatanchors.org](http://www.boatanchors.org)

[www.hammarlund.info](http://www.hammarlund.info)

-----  
Message-ID: <01f701c785a9\$8ebaea10\$660fa8c0@radiatoroom>  
From: "Tom Rauch" <w8ji@contesting.com>  
To: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: Opposed to Revision RM-11306  
Date: Mon, 23 Apr 2007 09:16:00 -0400  
MIME-Version: 1.0  
Content-Type: text/plain;  
    format=flowed;  
    charset="iso-8859-1";  
    reply-type=response  
Content-Transfer-Encoding: 7bit

You are correct, there can be (and are) sidebands extending beyond 3kHz when the shift is allowed to be 3 kHz.

But the point is the limit now is 1kHz, and the changes make the limit 3kHz. Our problems, all other things equal, become three times worse.

The baud rate also increased from 300 to no limit (that I can find), and that can also worsen things.

73, Tom W8JI

----- Original Message -----

From: "Al Parker" <anchor@ec.rr.com>  
To: "Tom Rauch" <w8ji@contesting.com>; "Old Tube Radios" <boatanchors@theporch.com>  
Sent: Monday, April 23, 2007 8:58 AM  
Subject: Re: Opposed to Revision RM-11306

> Tom,  
> From your website:  
> "The ARRL would have this section modified to say: "The  
> bandwidth of a RTTY or data emission must not exceed 3  
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> can't do both.  
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> won't continue it any further here.  
> 73,  
> Al, W8UT  
> New Bern, NC  
> www.boatanchors.org  
> www.hammarlund.info

>

-----  
Content-Disposition: inline  
Content-Transfer-Encoding: binary  
Mime-Version: 1.0  
From: John Sehring <jsehring@siouxvalley.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Old 'Lytics  
Content-Type: text/plain  
Message-Id: <20070423222416.3EFB5350A48@filter6.e-filtering.net>  
Date: Mon, 23 Apr 2007 16:24:16 -0600 (MDT)

A few of my local (non-e-list) BA buddies were trading "war" stories re "the oldest properly functioning electrolytic cap. I've seen."

What have you all seen? My National NC-2-40D from abt 1947 has what seem like the original HV caps. A tiny bit HV ripple is there but not noticable except when my ear is close to the speaker (volume control all the way down). I did allow plenty of time for them to reform before 100% ops.

One OT told stories of a 20's radio brought into radio shop where he worked as a kid. Complaint was "hum". Our Jeeves took chassis out of case, flipped it upside down, plugged it in, no hum. Back to the owner it went, no charge. Owner came back shortly in a huff, said "It HUMS!" Repeat of shop experience, no hum. Store owner finally takes radio back to owner. To make long story short, 'lytics of those days had liquid rather than paste electrolyte in 'em (had teeny vents). Turn set upside down = liquid in right place; set right side up, liquid not where it needed to be. Hum. PS this story was NOT told on April 1st!

--John Sehring WB0EQ/VE6

-----  
Mime-Version: 1.0  
Message-Id: <p06240800c2534b9fb6c7@[192.168.1.2]>  
Date: Mon, 23 Apr 2007 22:54:37 -0700  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Scott Robinson <spr@earthlink.net>  
Subject: Re: Old 'Lytics  
Content-Type: text/plain; charset="us-ascii" ; format="flowed"

Folks,

Well, I have a 1934 American Bosch radio that when last operated about 10 years ago still had good original wet electrolytics.

I also have a 1937 French Oradyne radio whose original filters are still good.

Amazing!

Regards,

Scott

-----  
From: wb3fau@att.net  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: John Sehring <jsehring@siouxvalley.net>  
Subject: Re: Old 'Lytics  
Date: Tue, 24 Apr 2007 12:35:40 +0000  
Message-Id:  
<042420071235.11524.462DF99B000C83C700002D0421603762239A0E00CC0D99@att.net>

John, I have 2 variations of National NC-100s. These are mid 30s built, they have the original electrolytics. There is a minumal hum in either radio. Russ.

-----  
Message-ID: <000101c7868f\$34d57c40\$6b9c1f45@rtconline.com>  
From: "Ken" <n5cm@rtconline.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Old 'Lytics  
Date: Tue, 24 Apr 2007 07:20:40 -0700  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Hi John & Gang,

Many years ago, before WW2 I sat in with a jazz band and played a couple of numbers on my electrical Hawaiian Guitar. While the band was playing, the banjo player's amplifier started humming! They looked at me, being the only radio bug in my small town, for help. I turned the box on its side and the hum disappeared! Their eyes kinda bulged out of their sockets. The telephone company had some equipments with electrolytics that were manufactured to last indefinitely. A lot of the "service" type components are seemingly disigned to last only so long and usually last only "so long". FWIW

Ken N5CM

----- Original Message -----

From: "John Sehring" <jsehring@siouxvalley.net>  
To: "Old Tube Radios" <boatanchors@theporch.com>  
Sent: Monday, April 23, 2007 3:24 PM  
Subject: Old 'Lytics

> A few of my local (non-e-list) BA buddies were trading "war" stories re  
"the  
> oldest properly functioning electrolytic cap. I've seen."  
>  
> What have you all seen? My National NC-2-40D from abt 1947 has what seem  
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did  
> allow plenty of time for them to reform before 100% ops.  
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Owner  
> came back shortly in a huff, said "It HUMS!" Repeat of shop experience,  
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> Store owner finally takes radio back to owner. To make long story short,  
> 'lytics of those days had liquid rather than paste electrolyte in 'em (had  
teeny  
> vents). Turn set upside down = liquid in right place; set right side up,  
liquid  
> not where it needed to be. Hum. PS this story was NOT told on April 1st!  
>  
> --John Sehring WB0EQ/VE6  
>  
>  
>  
>  
>  
> --  
> No virus found in this incoming message.  
> Checked by AVG Free Edition.  
> Version: 7.5.463 / Virus Database: 269.5.9/773 - Release Date: 4/22/2007  
8:18 PM  
>  
>

-----

From: wb3fau@att.net  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: "Ken" <n5cm@rtconline.com>  
Subject: Re: Old 'Lytics  
Date: Tue, 24 Apr 2007 15:01:06 +0000  
Message-Id:  
<042420071501.3012.462E1BB2000290A7000000BC421602806519A0E00CC0D99@att.net>

Yes, I think the old 'wet ' electrolytics seem to last longer. But with newer equipment, it has a lot to do with how long has it been stored? Most of this stuff fails because it has not been used. The caps seem to fail after being pressed back into use after extended storage. Admittedly some short out, but most just go open due to lack of use.  
Russ.

-----  
Date: Tue, 24 Apr 2007 12:01:41 -0400 (EDT)  
From: stuck in 50s <polepeeg@aa4rm.ba-watch.org>  
Message-Id: <200704241601.130G1ffH022494@fracas.netboobie.org>  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: n5cm@rtconline.com  
Subject: Re: Old 'Lytics

I think Mallory's FP-style twist-lock electrolytics finally got things right. The biggest thing being the seals to keep the paste in "dry" electrolytics damp.

If there's no leakage evidence, these things always seem to reform:

criteria:

to a 450vdc unit, apply 550v thru a 20k current limiter. If voltage doesn't rise to 490v or so after 10-20 min.s, something's wrong

Now the Asians took things to a new level of seal (ork ork) design & compactness in the mid-60s. Low-Z coupling between transistors provided the impetus. I've read this elzvahh & it ain't my invention

aa4rm aka marty

-----  
Message-ID: <462E3EFF.8080609@ar88.net>  
Date: Tue, 24 Apr 2007 13:31:43 -0400  
From: Al Klase <al@ar88.net>  
MIME-Version: 1.0

To: Old Tube Radios <boatanchors@theporch.com>  
CC: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Old 'Lytics  
Content-Type: text/plain; charset=ISO-8859-1; format=flowed  
Content-Transfer-Encoding: 7bit

Ken wrote:

> .....I turned the box on its side and the hum disappeared!....  
Hey Ken,

Go easy on us young wipper-snappers. Is that because the electrolyte was then able to re-wet the plates? Was that standard practice among the cognoscenti? I never encountered a wet electrolytic that wasn't bone dry. :-)

Regards,  
Al

--

Al Klase - N3FRQ  
Flemington, NJ  
<http://www.skywaves.ar88.net/>

-----  
Message-ID: <462E563D.9070003@cox.net>  
Date: Tue, 24 Apr 2007 12:10:53 -0700  
From: David Hollander <n7rk@cox.net>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: FS: Millen, Heathkit, Hallicrafters, Yaesu and Skillman  
Content-Type: text/plain; charset=us-ascii; format=flowed  
Content-Transfer-Encoding: 7bit

Here are some items for sale. Prices do not include shipping. I will ship overseas.

James Millen 92200 Transmatch (Antenna Tuner).....\$325 plus shipping  
This is an 80-10 meter 2 kilowatt unit with a built-in SWR bridge.  
According to one web site, the WARC bands are easily handled by this tuner using the closest band position (10 for 12, 15 for 17, 40 for 30). This tuner is in excellent condition with the exception of scratches on the top of the unit. The insides are in excellent condition and show no evidence of ever having been arced or burned. Includes a photocopy of the manual. The unit is unmodified with no extra holes. It does have one incorrect knob. This is a very solid antenna tuner!  
[http://members.cox.net/radiodx5/millen\\_tuner.JPG](http://members.cox.net/radiodx5/millen_tuner.JPG)  
[http://members.cox.net/radiodx5/millen\\_tuner6.JPG](http://members.cox.net/radiodx5/millen_tuner6.JPG)  
[http://members.cox.net/radiodx5/millen\\_tuner4.JPG](http://members.cox.net/radiodx5/millen_tuner4.JPG)



Hallicrafters SX-24 Receiver with Manual.....\$225 plus shipping  
This radio is in nice condition for a 65 year old receiver. The front panel silk screening looks very good and it has all of the correct knobs. The radio does have a number of scratches as seen in the photos. I did receive stations on the broadcast band and some of the short wave bands. I was able to hear my signal generator on the higher frequencies as the bands were dead. The BFO works and the S-meter work. This receiver will need electrical restoration as it appears to be all original under the chassis. Includes a photocopy of the manual.

<http://members.cox.net/radiodx5/sx24.JPG>

<http://members.cox.net/radiodx5/sx242.JPG>

<http://members.cox.net/radiodx5/sx245.JPG>

<http://members.cox.net/radiodx5/sx246.JPG>

Hallicrafters HT-40 Mark I Novice Transmitter & Manual.....\$125 plus shipping

This is 75 watt, crystal controlled 80-6 meter CW and AM transmitter from the early 1960's that was designed to match the SX-140 receiver and HA-5 VFO. I built one of these as kit (not this one) when I was 11 years old and it was my first transmitter. This HT-40 works well and puts out 50-60 watts. The insides and outsides are clean and unmodified and under the chassis appears to be original. The panel is very nice also. The case does have a number of scratches. It would not be difficult to repaint the case. Includes a photocopy of the manual.

<http://members.cox.net/radiostuff9/ht40.JPG>

<http://members.cox.net/radiostuff9/ht404.JPG>

<http://members.cox.net/radiostuff9/ht405.JPG>

Heathkit XC-2 2 Meter Converter.....\$95 plus shipping

This converter may be used with receivers tuning any 4 mc segment between the frequencies of 22 and 35 mc when appropriate crystal is used. Converts 144-148 mc signals to 22-26 mc. This unit is in excellent cosmetic condition. It is untested. Includes a schematic.

<http://members.cox.net/radiodx5/xc2.JPG>

<http://members.cox.net/radiodx5/xc22.JPG>

<http://members.cox.net/radiodx5/xc23.JPG>

Yaesu FT-101E 160-10 Meter Transceiver.....\$275 plus shipping

This transceiver works on SSB, CW and AM. It also receives WWV on 10 MHz. The radio can be operated on both 110/230 VAC and 12 vdc with the appropriate power cord. Only the 110 VAC power cord is included as I don't have the other. The unit is in nice shape and works well. I measured 100-120 watts out on a Bird wattmeter and the transmitted audio sounds excellent from on the air reports. Includes a copy of the manual on a CD.

<http://members.cox.net/radiostuff9/yaesuft101e.JPG>

<http://members.cox.net/radiostuff9/yaesuft101e4.JPG>

<http://members.cox.net/radiostuff9/yaesuft101e5.JPG>

Heathkit HW-12A Transceiver and Original Manual.....\$100 plus shipping  
he "A" version has both lower and upper sideband. The LSB/USB switch is below the main tuning knob. The HW-12A covers 3.8-4.0 MHz. Power is 200 watts PEP input. This unit is very clean. The empty socket seen in the chassis photo is for a crystal calibrator. This is untested as I don't have the AC supply or DC supply to test it. Includes the original manual, original mobile mounting bracket and the power supply connecting cable.

<http://members.cox.net/radiodx5/heathhw12.JPG>

<http://members.cox.net/radiodx5/heathhw124.JPG>

<http://members.cox.net/radiodx5/heathhw123.JPG>

Japanese Skillman Bug (Telegraph Key).....\$100 plus shipping  
This bug was marketed widely by Lafayette Radio and Radio Shack in the 1960s. It was manufactured from 1953 to 1968 by Dentsuseiki which then became Hi-Mound. The word 'Japan' is usually found molded into the bottom. The clear plastic cover is often missing or broken. It has an excellent 'crisp' feel when properly adjusted.

[http://members.cox.net/radiodx5/ja\\_bug.JPG](http://members.cox.net/radiodx5/ja_bug.JPG)

[http://members.cox.net/radiodx5/ja\\_bug2.JPG](http://members.cox.net/radiodx5/ja_bug2.JPG)

73 and thanks for looking.

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\*\*\*\*\*

Dave N7RK                      Boatanchors Home Page: <http://members.cox.net/n7rk>  
Phoenix, Arizona                \*DXCC Honor Roll\*        \*WAZ#22 - 75 Meter SSB\*

ex-XE2/N7RK, N7RK/ZB2, VK2ERK, ZM0AJN, WB6NRK, WN6IWX

Boatanchor and Antique Radio Collector

-----  
Message-ID: <004101c786a7\$873d2420\$97e47443@KB6NAX>

From: "Arden Allen" <[gumbear@pacbell.net](mailto:gumbear@pacbell.net)>

To: Old Tube Radios <[boatanchors@theporch.com](mailto:boatanchors@theporch.com)>

Subject: Re: Old 'Lytics

Date: Tue, 24 Apr 2007 11:58:20 -0700

MIME-Version: 1.0

Content-Type: text/plain;  
          charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

> .....A lot of the "service" type components  
are seemingly disigned to last only so long and usually last only "so long".  
.....

As established by the proliferation of cardboard tube electrolytics after WW2. General Electric electrolytics, the worst ever made, IMO, usually dried out in about five years.

Arden Allen  
KB6NAX

-----  
Message-ID: <004201c786a7\$88f0a080\$97e47443@KB6NAX>  
From: "Arden Allen" <gumbear@pacbell.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: "Ken" <n5cm@rtconline.com>  
Subject: Re: Old 'Lytics  
Date: Tue, 24 Apr 2007 12:28:59 -0700  
MIME-Version: 1.0  
Content-Type: text/plain;  
        charset="Windows-1252"  
Content-Transfer-Encoding: 7bit

> Yes, I think the old 'wet ' electrolytics seem to last longer. But  
with newer equipment,  
> it has a lot to do with how long has it been stored? Most of this  
stuff fails because  
> it has not been used. The caps seem to fail after being pressed  
back into use after  
> extended storage. Admittedly some short out, but most just go open  
due to lack of use.  
> Russ.

Actually, the reverse is more true. Assuming the capacitor is built to withstand living in a dry climate for a prolonged time shelf life is usually longer than service life if you neglect deformation over time of the oxide insulation layer. That is because there is a wearout mechanism inherent in aluminum electrolytics. If a cap has been out of use for a long time its leakage will be significantly higher as it begins to reform. If the leakage current is so high that the capacitor overheats it will of course fail, sometimes dramatically. As an aluminum electrolytic approaches end of life its series resistance will increase until it becomes useless. The higher the percentage of rated voltage is impressed on a capacitor the shorter its lifespan will be. Low quality cardboard and plastic tube electrolytics have poor hermeticity and eventually fail from drying out in addition to wearing out. Often electrolytics don't wear out but fail due to internal corrosion that eats away the link to the outside terminals. When a capacitor shorts it either fails open because an internal connection fuses or it remains shorted because the circuit cannot supply enough energy to fuse the connection. Shorts are caused by excessive voltage, deformation, overheating, or a manufacturing defect. The bottom line is never expect a capacitor that has been out of service for many years to function like new.

Reforming a capacitor may not return it to its full life expectancy but experience indicates it may yet supply good service if not already substantially used up.

Arden Allen  
KB6NAX

-----  
From: "Gary H. Harmon Jr." <gharmon@idworld.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Need Gonset 3111 Schematic/Manual  
Date: Tue, 24 Apr 2007 14:39:12 -0500  
Message-ID: <004e01c786a8\$3c2df120\$4001a8c0@yourtwa0macjqu>  
MIME-Version: 1.0  
Content-Type: text/plain;  
        charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Thanks in advance.

73, gary

=====//=====  
Gary H. Harmon, Jr. - K5JWK  
6003 Archwood  
San Antonio, TX 78239-1504  
210.657.1549 - Home  
210.884.6926 - Cell

"Retirement means everyday is Saturday except Sunday!"

-----  
Message-ID: <18411887.1177443864442.JavaMail.root@elwamui-hound.atl.sa.earthlink.net>  
Date: Tue, 24 Apr 2007 15:44:24 -0400 (EDT)  
From: spr@earthlink.net  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Old 'Lytics  
Cc: Ken <n5cm@rtconline.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=UTF-8  
Content-Transfer-Encoding: 7bit

Folks,

For modern aluminum electrolytic capacitors, I am told that if you stay at least

10% below the rated voltage, the life is unaffected by applied voltage.

As Hank van Cleef has remarked in the past, Mallory FPs in Tek scopes seem to last more or less forever. I went through my cap collection a few years ago and formed everything that would, tossing those that wouldn't. I was surprised to find that at least one NOS in box Sprague twist-lok would not re-form, even after 24 hours.

Regards,

Scott

-----Original Message-----

>From: Arden Allen <gumbear@pacbell.net>

>Sent: Apr 24, 2007 3:28 PM

>To: Old Tube Radios <boatanchors@theporch.com>

>Cc: Ken <n5cm@rtconline.com>

>Subject: Re: Old 'Lytics

>

>> Yes, I think the old 'wet ' electrolytics seem to last longer. But

>with newer equipment,

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>stuff fails because

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>overheating, or a manufacturing defect. The bottom line is never expect a  
>capacitor that has been out of service for many years to function like new.  
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>experience indicates it may yet supply good service if not already  
>substantially used up.

>  
>Arden Allen  
>KB6NAX  
>

-----  
From: w1id@comcast.net  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: Ken <n5cm@rtconline.com>  
Subject: Re: Old 'Lytics  
Date: Tue, 24 Apr 2007 19:53:16 +0000  
Message-Id:  
<042420071953.22759.462E602C00033081000058E722028887440B07CE99@comcast.net>  
MIME-Version: 1.0  
Content-Type: multipart/alternative;  
boundary="NextPart\_Webmail\_9m3u9jl4l\_22759\_1177444396\_0"

--NextPart\_Webmail\_9m3u9jl4l\_22759\_1177444396\_0  
Content-Type: text/plain  
Content-Transfer-Encoding: 8bit

Don't forget temperature. Most modern electrolytics are rated to operate for so many hours at the specified voltage and some temperature. For example 1000 hours at rated voltage and 40 degrees C. That would include ambient temperature as well as component temperature due to ripple current. You would need a manufacturer's data sheet to look at the curves to get more definitive answers.

----- Original message -----  
From: spr@earthlink.net

> Folks,  
>  
> For modern aluminum electrolytic capacitors, I am told that if you stay at least  
> 10% below the rated voltage, the life is unaffected by applied voltage.  
>  
> As Hank van Cleef has remarked in the past, Mallory FPs in Tek scopes seem to  
> last more or less forever. I went through my cap collection a few years ago and  
> formed everything that would, tossing those that wouldn't. I was surprised to  
> find that at least one NOS in box Sprague twist-lok would not re-form, even  
> after 24 hours.  
>  
> Regards,  
>  
> Scott  
>

> -----Original Message-----

> >From: Arden Allen

> >Sent: Apr 24, 2007 3:28 PM

> >To: Old Tube Radios

> >Cc: Ken

> >Subject: Re: Old 'Lytics

> >

> >> Yes, I think the old 'wet ' electrolytics seem to last longer. But

> >>with newer equipment,

> >> it has a lot to do with how long has it been stored? Most of this

> >>stuff fails because

> >> it has not been used. The caps seem to fail after being pressed

> >>back into use after

> >> extended storage. Admittedly some short out, but most just go open

> >>due to lack of use.

> >> Russ.

> >

> >Actually, the reverse is more true. Assuming the capacitor is built to

> >withstand living in a dry climate for a prolonged time shelf life is usually

> >longer than service life if you neglect deformation over time of the oxide

> >insulation layer. That is because there is a wearout mechanism inherent in

> >aluminum electrolytics. If a cap has been out of use for a long time its

> >leakage will be significantly higher as it begins to reform. If the leakage

> >current is so high that the capacitor overheats it will of course fail,

> >sometimes dramatically. As an aluminum electrolytic approaches end of life

> >its series resistance will increase until it becomes useless. The higher

> >the percentage of rated voltage is impressed on a capacitor the shorter its

> >lifespan will be. Low quality cardboard and plastic tube electrolytics have

> >poor hermeticity and eventually fail from drying out in addition to wearing

> >out. Often electrolytics don't wear out but fail due to internal corrosion

> >that eats away the link to the outside terminals. When a capacitor shorts

> >it either fails open because an internal connection fuses or it remains

> >shorted because the circuit cannot supply enough energy to fuse the

> >connection. Shorts are caused by excessive voltage, deformation,

> >overheating, or a manufacturing defect. The bottom line is never expect a

> >capacitor that has been out of service for many years to function like new.

> >Reforming a capacitor may not return it to its full life expectancy but

> >experience indicates it may yet supply good service if not already

> >substantially used up.

> >

> >Arden Allen

> >KB6NAX

> >

>

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Content-Type: text/html

Content-Transfer-Encoding: 8bit

<html><body>

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<DIV>&nbsp;</DIV>

<BLOCKQUOTE style="PADDING-LEFT: 5px; MARGIN-LEFT: 5px; BORDER-LEFT: #1010ff 2px solid">----- Original message -----<br>From: spr@earthlink.net<br><br>&gt; Folks, <br>&gt; <br>&gt; For modern aluminum electrolytic capacitors, I am told that if you stay at least <br>&gt; 10% below the rated voltage, the life is unaffected by applied voltage. <br>&gt; <br>&gt; As Hank van Cleef has remarked in the past, Mallory FPs in Tek scopes seem to <br>&gt; last more or less forever. I went through my cap collection a few years ago and <br>&gt; formed everything that would, tossing those that wouldn't. I was surprised to <br>&gt; find that at least one NOS in box Sprague twist-lok would not re-form, even <br>&gt; after 24 hours. <br>&gt; <br>&gt; Regards, <br>&gt; <br>&gt; Scott <br>&gt; <br>&gt; ----- Original Message-----<br>&gt; &gt;From: Arden Allen <GUMBEAR@PACBELL.NET><br>&gt; &gt;Sent: Apr 24, 2007 3:28 PM <br>&gt; &gt;To: Old Tube Radios<br><BOATANCHORS@THEPORCH.CO

M><br>

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&Arden Allen <BR>&gt;KB6NAX <BR>&gt; <BR>&gt; </BLOCKQUOTE></body></  
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End of BOATANCHORS Digest 4043

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